

WHAT IS CLAIMED IS:

1. An adenoviral expression library comprising a plurality of recombinant adenoviruses,
5 each recombinant adenovirus being deleted for an essential gene of a late transcriptional region of adenoviral genome and having the essential gene expressibly cloned in a second transcriptional region of adenoviral genome, each recombinant adenovirus further comprising an expressible piece of exogenous DNA.
- 10 2. An adenoviral expression library according to claim 50, wherein the essential gene of a late transcriptional region is the gene of adenovirus protease.
3. An adenoviral expression library according to claim 51, wherein the second transcriptional region is an early transcriptional region.
- 15 4. An adenoviral expression library according to claim 52, wherein the early transcriptional region is selected from the group consisting of E1, E2, E3 and E4 transcriptional regions.
- 20 5. An adenoviral expression library according to claim 53, wherein the early transcriptional region is E1 transcriptional region.
6. An adenoviral expression library according to claim 51, wherein the essential gene is a part of a first expression cassette.
- 25 7. An adenoviral expression library according to claim 55, wherein the expressible piece of exogenous DNA is a part of the first expression cassette.

8. An adenoviral expression library according to claim 56, wherein the first expression cassette is a dicistronic cassette.

5 9. An adenoviral expression library according to claim 57, wherein the first expression cassette comprises a regulatable promoter.

10. An adenoviral expression library according to claim 58, wherein the regulatable promoter is an inducible promoter.

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11. An adenoviral expression library according to claim 59, wherein the inducible promoter is a tetracycline-inducible promoter.

12. An adenoviral expression library according to claim 51, wherein the expressible
15 piece of exogenous DNA is a part of a second expression cassette.

13. An adenoviral expression library according to claim 61, wherein the second expression cassette comprises a regulatable promoter.

20 14. An adenoviral expression library according to claim 62, wherein the regulatable promoter is an inducible promoter.

15. An adenoviral expression library according to claim 63, wherein the inducible promoter is a tetracycline-inducible promoter.

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16. An adenoviral expression library according to claim 51, wherein the expressible piece of exogenous DNA is derived from a DNA library.

5 17. An adenoviral expression library according to claim 51, wherein the expressible piece of exogenous DNA is a DNA fragment expressing antisense RNA fragment for a protein gene or a cis-acting element regulating gene expression.

10 18. An adenoviral expression library according to claim 66, wherein the cis-acting element regulating gene expression is selected from the group consisting of promoters (TATA boxes), enhancers, suppressers, IRES, polyA, termination sequences, and UTR sequences of messages that regulate the stability and/or transport of mRNA.

19. An adenoviral expression library according to claim 51, said library having diversity of at least 10^3 clones.

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20. An adenoviral expression library according to claim 62, said library having diversity of at least 10^6 clones.